

Claims

1. Bearing unit, comprising at least two bearing means (1, 2) which are displaceably supported with respect to each other, at least one of which bearing means  
5 (1, 2) comprises two metal means parts (9, 10; 17, 19) which are connected to each other through a connection means (11; 18; 24; 28), characterised in that the connection means (11; 18; 24; 28) comprises a brazed and/or soldered connection (14, 15; 22).

2. Bearing unit according to claim 1, wherein the connection means (11; 18; 24;  
10 28) also comprises at least one further connection, e.g. a welded (16; 27), screwed (30) glued or a plastically formed (23) connection.

3. Bearing unit according to claim 1 or 2, wherein the bearing means are carried out as ring means (1, 2) which are rotatably supported with respect to each other, at  
15 least one of said ring means (1, 2) comprising ring means parts (9, 10; 17, 19) which are connected through a connection means (11; 18; 24; 28) which comprises a brazed and/or a soldered connection (14, 15; 22).

4. Bearing unit according to claim 3, wherein at least two series of rolling  
20 elements (7, 8) are provided which are each in contact with respective raceways (3, 4) of both ring means parts (9, 10), wherein each ring means part (9, 10) is connected to an intermediate ring part (12, 13) through a brazed connection (14, 15), and said intermediate ring parts (12, 13) are connected to each other through a welded connection (16).

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5. Bearing unit according to claim 3 or 4, wherein at least two series of rolling elements (7, 8) are provided which are each in contact with respective raceways (5, 6) of both ring means parts (17, 19), one of said ring means parts (17) comprising an abutment (42) and being connected to an intermediate ring part (25) through a brazed  
30 connection (22), said intermediate ring part (25) comprising a flange (23, 26, 29) which is positioned at one axial end of the other ring means part (19), the other end of which abutting against said abutment (42).

6. Bearing unit according to claim 5, wherein the flange (29) is connected to the intermediate ring part (23) through a screw connection (30).

7. Bearing unit according to claim 5, wherein the flange (26) is connected to the  
5 intermediate ring part (25) through a welded connection (27).

8. Bearing unit according to claim 5, wherein the flange (23) is obtained through plastic deformation of the intermediate ring part (25).

10 9. Bearing unit according to any of claims 3-8, wherein the ring means parts (9, 10) and the intermediate ring parts (12, 13) together constitute an inner ring means (2) and/or an outer ring means (1).

15 10. Bearing unit according to any of the preceding claims, wherein the connection means (11; 18; 24; 28) have concentric facing surfaces which enclose a layer of brazed material (22; 32).

11. Bearing unit according to claim 1 or 2, wherein the bearing means are slidably supported with respect to each other.

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12. Bearing unit according to any of the preceding claims, wherein the connection means (11; 18; 24; 28) comprises a relatively high grade material, e.g. a low carbon, high strength steel material, stainless steel or non-ferro materials like copper alloys, nickel alloys etc.

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13. Bearing unit according to any of the preceding claims, wherein the connection means (11; 18, 24, 28) comprises a light weight material, e.g. aluminium, titanium, magnesium or their alloys.

30 14. Bearing unit according to any of the preceding claims, wherein at least one of the bearing means (1, 2) and/or the connection means (11; 18; 24; 28) comprises a ceramic component.

15. Bearing assembly, comprising a bearing unit with at least two bearing means (1, 2) which are displaceably supported with respect to each other, and an auxiliary unit (31) which is connected to at least one of said bearing means through a connection means (36), characterised in that the connection means (36) comprises a brazed or  
5 soldered connection (32).

16. Bearing assembly according to claim 15, wherein the connection means (36) also comprises at least one further connection, e.g. a welded, screwed, glued or plastically formed connection.

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17. Bearing assembly according to claim 15 or 16, wherein the auxiliary unit comprises brake means, e.g. a brake disc or a brake drum (35).

18. Bearing assembly according to claim 15 or 16, wherein the auxiliary unit  
15 comprises a cooling element, e.g. a vane member.

19. Bearing assembly according to claim 15 or 16, wherein the auxiliary unit comprises a mounting flange (44, 45, 46).

20. Bearing assembly according to claim 19, wherein the mounting flange (44,  
20 45, 46) comprises a cast iron material, e.g. an ausformed ductile iron.